

**APPENDIX H:**  
**SUPPORTING DATA FOR LOCAL FIRE AND EMS ¾**  
**INTEROPERABILITY EXPERIENCES AND REQUIREMENTS (SECTION 4)**

**Table H-1: Interaction with other Agencies Affected by the Lack of Interoperability versus Confidence in Ability to Handle Day-to-Day Interoperability**

		Confidence in Ability to Handle Day-to-Day Interoperability										Avg
		1		2		3		4		5		
		n	%	n	%	n	%	n	%	n	%	
Lack of interoperability affects ability	Yes	39	11.4%	37	10.8%	90	26.2%	101	29.4%	76	22.2%	3.40
	No	23	5.1%	9	2.0%	63	13.9%	145	32.0%	213	47.0%	4.14

**Table H-2: Interaction with other Agencies Affected by the Lack of Interoperability versus Confidence in Ability to Handle Mutual Aid Interoperability**

		Confidence in Ability to Handle Mutual Aid Interoperability										Avg
		1		2		3		4		5		
		n	%	n	%	n	%	n	%	n	%	
Lack of interoperability affects ability	Yes	61	17.8%	87	25.4%	105	30.6%	65	19.0%	25	7.3%	2.73
	No	22	4.8%	32	7.0%	127	27.9%	138	30.3%	136	29.9%	3.73

**Table H-3: Interaction with other Agencies Affected by the Lack of Interoperability versus Confidence in Ability to Handle Task Force Interoperability**

		Confidence in Ability to Handle Task Force Interoperability										Avg
		1		2		3		4		5		
		n	%	n	%	n	%	n	%	n	%	
Lack of interoperability affects ability	Yes	156	48.3%	76	23.5%	53	16.4%	20	6.2%	18	5.6%	1.97
	No	92	22.1%	74	17.8%	111	26.7%	79	19.0%	60	14.4%	2.86

**Table H-4: Comparison of System Architectures**

Comparison of agencies that use conventional system architecture types versus those that use trunked system architecture types. Independent t –test, 95 % confidence level			
	Conventional	Trunked	Statistical Significance
Ability of radio to handle three types of interoperability situations (where 1 = poor to 5 = excellent)			
Day-to-day	3.79 (716)	4.03 (189)	sd
Mutual aid	3.25 (717)	3.51 (188)	sd
Task force	2.37 (648)	2.89 (175)	sd

*Numbers in parentheses indicate number of agencies that responded to questions with 1 or 2, etc.; sd = statistically significant difference between the two groups; nsd = no statistically significant difference between the two groups. Significance at .05 (95%) confidence level.*

**Table H-5: Frequency of Agency Interoperable Communications with Local Organizations**

		Frequency - Local level									
		Daily		Weekly		Monthly		Yearly		Never	
		n	%	n	%	n	%	n	%	n	%
<b>Agency Size</b>	<b>1-24</b>	92	47.7%	72	37.3%	21	10.9%	3	1.6%	5	2.6%
	<b>25-49</b>	129	62.6%	55	26.7%	18	8.7%	3	1.5%	1	.5%
	<b>50-99</b>	106	78.5%	18	13.3%	6	4.4%	3	2.2%	2	1.5%
	<b>100-249</b>	227	73.9%	40	13.0%	25	8.1%	8	2.6%	7	2.3%
	<b>250+</b>	103	77.4%	17	12.8%	7	5.3%	3	2.3%	3	2.3%
<b>Agency Type</b>	<b>Fire Departments</b>	507	64.7%	173	22.1%	70	8.9%	19	2.4%	15	1.9%
	<b>EMS Departments</b>	122	83.6%	19	13.0%	3	2.1%			2	1.4%
	<b>Special</b>	28	63.6%	10	22.7%	4	9.1%	1	2.3%	1	2.3%

**Table H-6: Frequency of Agency Interoperable Communications with State Organizations**

		Frequency - State level									
		Daily		Weekly		Monthly		Yearly		Never	
		n	%	n	%	n	%	n	%	n	%
<b>Agency Size</b>	<b>1-24</b>	16	9.4%	16	9.4%	24	14.0%	47	27.5%	68	39.8%
	<b>25-49</b>	9	4.7%	15	7.9%	31	16.3%	63	33.2%	72	37.9%
	<b>50-99</b>	4	3.1%	19	14.7%	26	20.2%	25	19.4%	55	42.6%
	<b>100-249</b>	16	5.6%	31	10.9%	46	16.2%	90	31.7%	101	35.6%
	<b>250+</b>	18	14.4%	28	22.4%	22	17.6%	20	16.0%	37	29.6%
<b>Agency Type</b>	<b>Fire Departments</b>	49	6.8%	83	11.5%	124	17.1%	210	29.0%	258	35.6%
	<b>EMS Departments</b>	10	7.2%	20	14.4%	16	11.5%	31	22.3%	62	44.6%
	<b>Special</b>	4	10.8%	6	16.2%	9	24.3%	4	10.8%	14	37.8%

**Table H-7: Frequency of Agency Interoperable Communications with Federal Organizations**

		Frequency - Federal level									
		Daily		Weekly		Monthly		Yearly		Never	
		n	%	n	%	n	%	n	%	n	%
<b>Agency Size</b>	<b>1-24</b>	10	6.0%	5	3.0%	4	2.4%	23	13.9%	124	74.7%
	<b>25-49</b>	5	2.6%	7	3.7%	4	2.1%	20	10.6%	153	81.0%
	<b>50-99</b>			4	3.2%	5	4.0%	17	13.5%	100	79.4%
	<b>100-249</b>	5	1.8%	11	3.9%	12	4.3%	59	21.0%	194	69.0%
	<b>250+</b>	11	8.8%	11	8.8%	14	11.2%	26	20.8%	63	50.4%
<b>Agency Type</b>	<b>Fire Departments</b>	16	2.2%	28	3.9%	33	4.6%	123	17.3%	512	71.9%
	<b>EMS Departments</b>	3	2.2%	5	3.7%	5	3.7%	17	12.7%	104	77.6%
	<b>Special</b>	12	28.6%	5	11.9%	1	2.4%	5	11.9%	19	45.2%

**Table H-8: Frequency of Local Level Interaction versus Confidence in Ability to Establish Links at the Local Level**

		Confidence in Ability to Establish Links - Local level										Avg
		1		2		3		4		5		
		n	%	n	%	n	%	n	%	n	%	
Frequency - Local level	Daily	24	3.7%	25	3.8%	82	12.6%	141	21.6%	380	58.3%	4.27
	Weekly	10	5.0%	14	7.0%	27	13.6%	46	23.1%	102	51.3%	4.09
	Monthly	6	7.8%	4	5.2%	14	18.2%	19	24.7%	34	44.2%	3.92
	Yearly	1	5.0%	3	15.0%	5	25.0%	7	35.0%	4	20.0%	3.50
	Never	8	44.4%	4	22.2%	2	11.1%	3	16.7%	1	5.6%	2.17

**Table H-9: Frequency of State Level Interaction versus Confidence in Ability to Establish Links at the State Level**

		Confidence in Ability to Establish Links - State level										Avg
		1		2		3		4		5		
		n	%	n	%	n	%	n	%	n	%	
Frequency - State level	Daily	5	8.2%	5	8.2%	17	27.9%	11	18.0%	23	37.7%	3.69
	Weekly	12	11.3%	12	11.3%	29	27.4%	23	21.7%	30	28.3%	3.44
	Monthly	15	10.3%	30	20.7%	48	33.1%	26	17.9%	26	17.9%	3.12
	Yearly	36	14.9%	41	16.9%	73	30.2%	42	17.4%	50	20.7%	3.12
	Never	175	57.8%	32	10.6%	58	19.1%	20	6.6%	18	5.9%	1.92

**Table H-10: Frequency of Federal Interaction versus Confidence in Ability to Establish Links at the Federal Level**

		Confidence in Ability to Establish Links - Federal level										Avg
		1		2		3		4		5		
		n	%	n	%	n	%	n	%	n	%	
Frequency - Federal level	Daily	7	24.1%	4	13.8%	5	17.2%	5	17.2%	8	27.6%	3.10
	Weekly	7	20.0%	6	17.1%	6	17.1%	7	20.0%	9	25.7%	3.14
	Monthly	14	36.8%	4	10.5%	10	26.3%	5	13.2%	5	13.2%	2.55
	Yearly	60	42.0%	25	17.5%	34	23.8%	13	9.1%	11	7.7%	2.23
	Never	432	73.8%	57	9.7%	49	8.4%	24	4.1%	23	3.9%	1.55

**Table H-11: Comparison of Agencies Confidence Levels in their Ability to Establish Links**

Comparison of agencies that are confident in their ability to establish links (rating of 4 or 5) with agencies are less confident in their ability to establish links (rating of 1 or 2): Independent t –test, 95 % confidence level			
	Less Confident in Ability to Establish Links at Local Level (1,2)	Confident in Ability to Establish Links at Local Level (4,5)	Statistical Significance
Ability of radio to handle three types of interoperability situations (where 1 = poor to 5 = excellent)			
Day-to-day	2.51 (95)	4.19 (720)	sd
Mutual aid	2.04 (94)	3.65 (719)	sd
Task force	1.69 (89)	2.73 (651)	sd
	Less Confident in Ability to Establish Links at State Level (1,2)	Confident in Ability to Establish Links at State Level (4,5)	Statistical Significance
Ability of radio to handle three types of interoperability situations (where 1 = poor to 5 = excellent)			
Day-to-day	3.39 (380)	4.34 (275)	sd
Mutual aid	2.74 (382)	4.00 (273)	sd
Task force	1.85 (355)	3.28 (257)	sd
	Less Confident in Ability to Establish Links at Federal Level (1,2)	Confident in Ability to Establish Links at Federal Level (4,5)	Statistical Significance
Ability of radio to handle three types of interoperability situations (where 1 = poor to 5 = excellent)			
Day-to-day	3.71 (636)	4.26 (110)	sd
Mutual aid	3.10 (639)	4.10 (109)	sd
Task force	2.16 (591)	3.56 (105)	sd

Numbers in parentheses indicate number of agencies that responded to questions with 1 or 2, etc.; sd = statistically significant difference between the two groups; nsd = no statistically significant difference between the two groups. Significance at .05 (95%) confidence level.

**Table H-12: Current Operating Frequency Band versus Type of Fire Department**

		Low-Band VHF		High-Band VHF		Low-Band UHF		800 MHz		Other	
		n	%	n	%	n	%	n	%	n	%
Type of Fire Department	Volunteer	129	32.0%	278	69.0%	75	18.6%	27	6.7%	2	.5%
	Career	35	13.8%	163	64.2%	94	37.0%	122	48.0%	8	3.1%
	Combination	41	30.1%	109	80.1%	48	35.3%	45	33.1%	7	5.1%

**Table H-13: Primary Radio Languages**

		Plain English		Code System		Other	
		n	%	n	%	n	%
<b>Agency Size</b>	<b>1-24</b>	153	78.5%	36	18.5%	6	3.1%
	<b>25-49</b>	164	79.2%	40	19.3%	3	1.4%
	<b>50-99</b>	118	86.1%	15	10.9%	4	2.9%
	<b>100-249</b>	258	83.5%	46	14.9%	5	1.6%
	<b>250+</b>	117	88.0%	12	9.0%	4	3.0%
<b>Agency Type</b>	<b>Fire Departments</b>	659	83.1%	114	14.4%	20	2.5%
	<b>EMS Departments</b>	115	78.8%	30	20.5%	1	.7%
	<b>Special</b>	37	84.1%	5	11.4%	2	4.5%

**Table H-14: Comparison of Primary Radio Languages**

Comparison of agencies that use plain English versus code systems. Independent t –test, 95 % confidence level			
	Plain English	Code Systems	Statistical Significance
Ability of radio to handle three types of interoperability situations (where 1 = poor to 5 = excellent)			
Day-to-day	3.87 (784)	3.65 (140)	sd
Mutual aid	3.37 (782)	3.06 (140)	sd
Task force	2.52 (712)	2.24 (125)	nsd

Numbers in parentheses indicate number of agencies that responded to questions with 1 or 2, etc.; sd = statistically significant difference between the two groups; nsd = no statistically significant difference between the two groups. Significance at .05 (95%) confidence level.

**Table H-15: Frequency of Agency Interaction at the Local Level versus Existence of Intergovernmental Agreements**

		Frequency - Local level									
		Daily		Weekly		Monthly		Yearly		Never	
		n	%	n	%	n	%	n	%	n	%
<b>Intergovernmental Agreements</b>	<b>Yes</b>	582	68.8%	177	20.9%	62	7.3%	16	1.9%	9	1.1%
	<b>No</b>	66	56.9%	23	19.8%	14	12.1%	4	3.4%	9	7.8%

**Table H-16: Frequency of Agency Interaction at the State Level versus Existence of Intergovernmental Agreements**

		Frequency - State level									
		Daily		Weekly		Monthly		Yearly		Never	
		n	%	n	%	n	%	n	%	n	%
<b>Intergovernmental Agreements</b>	<b>Yes</b>	60	7.7%	94	12.0%	136	17.4%	210	26.9%	281	36.0%
	<b>No</b>	2	1.9%	11	10.2%	13	12.0%	32	29.6%	50	46.3%

**Table H-17: Frequency of Agency Interaction at the Federal Level versus Existence of Intergovernmental Agreements**

		Frequency - Federal level									
		Daily		Weekly		Monthly		Yearly		Never	
		n	%	n	%	n	%	n	%	n	%
<b>Intergovernmental Agreements</b>	<b>Yes</b>	30	3.9%	37	4.8%	35	4.5%	132	17.1%	540	69.8%
	<b>No</b>	1	1.0%	1	1.0%	3	2.9%	11	10.6%	88	84.6%

**Table H-18: Comparison of Intergovernmental Agreements**

<b>Comparison of agencies that have intergovernmental agreements and agencies that do not have intergovernmental agreements. Independent t –test, 95 % confidence level</b>			
	<b>Have Intergovernmental Agreements</b>	<b>Do not have Intergovernmental Agreements</b>	<b>Statistical Significance</b>
Overall ability to handle interoperability situations today (where 1 = poor to 5 = excellent)	3.43 (840)	2.98 (115)	sd
Confidence in agency’s training to handle communications interoperability (where 1 = poor to 5 = excellent)	3.15 (835)	2.74 (116)	sd

*Numbers in parentheses indicate number of agencies that responded to questions with 1 or 2, etc.; sd = statistically significant difference between the two groups; nsd = no statistically significant difference between the two groups. Significance at .05 (95%) confidence level.*